

09/ 845,742

~~09567863~~

FILE 'HOME' ENTERED AT 10:25:51 ON 15 APR 2004

=>

=> file biosis medline caplus wpids uspatfull  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'BIOSIS' ENTERED AT 10:26:13 ON 15 APR 2004  
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FILE 'CAPLUS' ENTERED AT 10:26:13 ON 15 APR 2004  
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FILE 'WPIDS' ENTERED AT 10:26:13 ON 15 APR 2004  
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FILE 'USPATFULL' ENTERED AT 10:26:13 ON 15 APR 2004  
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s (solid support? or surface?) (6a) immobil?(6a) (diels alder or cycloaddition?)  
4 FILES SEARCHED...

L1 7 (SOLID SUPPORT? OR SURFACE?) (6A) IMMOBIL?(6A) (DIELS ALDER OR  
CYCLOADDITION?)

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 5 DUP REM L1 (2 DUPLICATES REMOVED)

=> d l2 bib abs 1-5

L2 ANSWER 1 OF 5 USPATFULL on STN

AN 2003:306367 USPATFULL

TI Method for immobilizing oligonucleotides employing the cycloaddition  
bioconjugation method

IN Pieken, Wolfgang, Boulder, CO, UNITED STATES  
Wolter, Andreas, Hamburg, GERMANY, FEDERAL REPUBLIC OF  
Sebesta, David P., Longmont, CO, UNITED STATES  
Leuck, Michael, Boulder, CO, UNITED STATES  
Latham-Timmons, Hallie A., Boulder, CO, UNITED STATES  
Pilon, John, Ft. Collins, CO, UNITED STATES  
Husar, Gregory M., Longmont, CO, UNITED STATES

PI US 2003215801 A1 20031120

AI US 2001-845742 A1 20010501 (9)

RLI Continuation-in-part of Ser. No. US 1999-341337, filed on 8 Jul 1999,  
PENDING A 371 of International Ser. No. WO 1998-US649, filed on 8 Jan  
1998, PENDING

PRAI US 2000-201561P 20000501 (60)

US 2001-265020P 20010130 (60)

DT Utility

FS APPLICATION

LREP SWANSON & BRATSCHUN L.L.C., 1745 SHEA CENTER DRIVE, SUITE 330, HIGHLANDS  
RANCH, CO, 80129

CLMN Number of Claims: 22

09567863

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 2144

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention discloses a novel method for immobilizing molecules to a support. Specifically, this invention discloses a method of immobilizing derivatized biomolecules, such as oligonucleotides, using cycloaddition reactions, such as the Diels-Alder reaction. Included in this invention are the novel immobilized biomolecules that can be prepared according to the method of this invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:326931 CAPLUS

DN 139:85093

TI A Novel Anthracenyl Tagged Protecting Group for "Phase-Switching"  
Applications in Parallel Synthesis

AU Li, Xin; Abell, Chris; Ladlow, Mark

CS University Chemical Laboratory, University of Cambridge, Cambridge, CB2  
1EW, UK

SO Journal of Organic Chemistry (2003), 68(11), 4189-4194

CODEN: JOCEAH; ISSN: 0022-3263

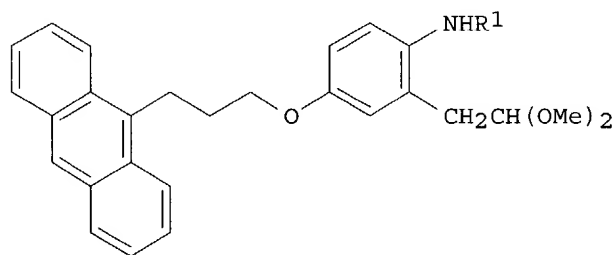
PB American Chemical Society

DT Journal

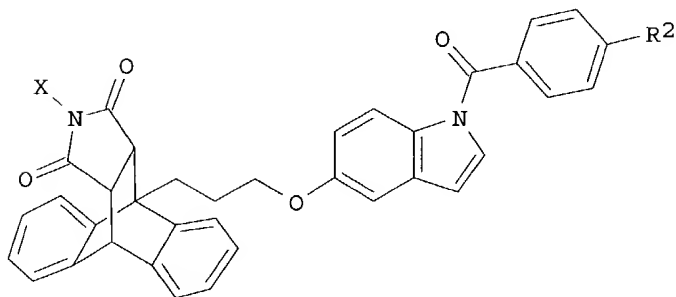
LA English

OS CASREACT 139:85093

GI



I



II

AB A new "phase-switching" protecting group I (R<sub>1</sub> = H) that facilitates the parallel synthesis of carboxylic acids, esters, and carboxamides is described. Acylation of I with 4-bromobenzoyl chloride gave the amide I

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(R1 = 4-BrC6H4CO), which was **immobilized** on **solid support** via **Diels-Alder** cycloaddn. with maleimide functionalized polystyrene resin and underwent Suzuki coupling with a series of boronic acids R2B(OH)2 (R2 = 4-MeOC6H4, 4-FC6H4, 3-thienyl) followed by intramol. heterocyclization to give the corresponding N-acyl indoles II (X = solid support). A series of carboxylic acids, esters, and carboxamides 4-R2C6H4COR3 (R3 = HO, MeO, PrN) was then prepared via activation of the "safety-catch" followed by cleavage of II on treatment with the desired nucleophile.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:181359 CAPLUS

TI Functionalization of the surface of nanoparticles via organic transformations

AU Gao, Yong

CS Department of Chemistry and Biochemistry, Southern Illinois University, Carbondale, IL, 62901-4409, USA

SO Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), COLL-256 Publisher: American Chemical Society, Washington, D. C.

CODEN: 69DSA4

DT Conference; Meeting Abstract

LA English

AB The first part of this presentation is to discuss our synthetic studies of a pentapeptide Phe-Ala-Ala-Ala-Ala on the surface of monolayer-protected gold nanoclusters (Au MPCs). Au MPCs protected with a layer of 1-dodecanethiol (90%) and 11-mercapto-1-undecanol (10%) were used as a template for peptide elongation. The second portion of this talk will focus on the kinetics studies of a **Diels-Alder** reaction between 9-anthracenemethyl 11-mercaptopundecanate **immobilized** on the **surface** of Au MPCs and N-(4-nitrophenyl)maleimide in D-chloroform. The reaction was found to be a second-order process that proceeded faster than the one in the solution phase. The unusual rate enhancement was probably due to the concentration of diene on the surface of Au MPCs. Our studies examined the organic transformations under the nanometer dimensions and brought insight on some nano-bio-transformations, for example, the high efficiency of peptide elongation on the surface of the 20 nm-sized ribosomal nanoparticles.

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:695035 CAPLUS

DN 138:80522

TI Fabrication of nano-structure by Diels-Alder reaction

AU Matsubara, Seiji; Yamamoto, Hiromasa; Oshima, Koichiro; Mouri, Emiko; Matsuoka, Hideki

CS Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, 606-8501, Japan

SO Chemistry Letters (2002), (9), 886-887

CODEN: CMLTAG; ISSN: 0366-7022

PB Chemical Society of Japan

DT Journal

LA English

AB A dip-pen nanolithog. is described which is based on Diels-Alder reaction of (hydroxyoxatridecanyl)furan (ink) with undecene-modified silica surface. This is a simple method to construct a nano-line and a nano-site which contains hetero-atoms regularly on the flat hydrophobic alkene surface.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L2 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
DUPLICATE 1  
AN 2001:491301 BIOSIS  
DN PREV200100491301  
TI Covalent modification and **surface immobilization** of  
nucleic acids via the **Diels-Alder** bioconjugation  
method.  
AU Husar, Gregory M.; Anziano, Dominick J.; Leuck, Michael; Sebesta, David P.  
[Reprint author]  
CS Proligo, LLC, 2995 Wilderness Place, Suite 207, Boulder, CO, 80301, USA  
SO Nucleosides Nucleotides and Nucleic Acids, (2001) Vol. 20, No. 4-7, pp.  
559-566. print.  
ISSN: 1525-7770.  
DT Article  
LA English  
ED Entered STN: 24 Oct 2001  
Last Updated on STN: 23 Feb 2002  
AB The importance of chemically modified and surface immobilized nucleic  
acids has inspired the development of a wide variety of complementary  
techniques for covalent oligonucleotide preparation and immobilization.  
We are developing technology based on the use of a Diels-Alder reaction  
for accomplishing the covalent modification of oligonucleotides. Reported  
herein is preliminary progress toward the establishment of robust reagents  
for introducing the reactive functionality, as well as studies employing  
the BIACORE system to demonstrate surface immobilization by the method.

=>

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=> s (solid support? or surface?) (8a) (diels alder or cycloaddition?)
4 FILES SEARCHED...
L3      316 (SOLID SUPPORT? OR SURFACE?) (8A) (DIELS ALDER OR CYCLOADDITION?)
      )
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=> s (solid support? or surface?) (6a) (diels alder or cycloaddition?)
4 FILES SEARCHED...
L4      260 (SOLID SUPPORT? OR SURFACE?) (6A) (DIELS ALDER OR CYCLOADDITION?)
      )
```

```
=> dup rem l4
PROCESSING COMPLETED FOR L4
L5      243 DUP REM L4 (17 DUPLICATES REMOVED)
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```
=> s l5 and py<=1998
2 FILES SEARCHED...
4 FILES SEARCHED...
L6      99 L5 AND PY<=1998
```

```
=> s l6 and (biomolecule? or macromolecule? or label?)
L7      3 L6 AND (BIOMOLECULE? OR MACROMOLECULE? OR LABEL?)
```

```
=> d l7 bib abs 1-3
```

```
L7  ANSWER 1 OF 3  USPATFULL on STN
AN   2001:112515  USPATFULL
TI   Method for solution phase synthesis of oligonucleotides
IN   Pieken, Wolfgang, Boulder, CO, United States
      McGee, Danny, San Mateo, CA, United States
      Settle, Alecia, Superior, CO, United States
      Zhai, Yansheng, Palo Alto, CA, United States
      Huang, Jianping, Lafayette, CO, United States
PA   Proligo LLC, Boulder, CO, United States (U.S. corporation)
PI   US 6262251      B1   20010717
      WO 9714706  19970424
AI   US 1998-51449      19980406 (9)
      WO 1996-US16668      19961017
      19980406  PCT 371 date
      19980406  PCT 102(e) date
PRAI  US 1995-5619P      19951019 (60)
DT   Utility
FS   GRANTED
EXNAM Primary Examiner: Wilson, James O.; Assistant Examiner: Owens, Howard
LREP  Swanson & Bratschun LLC
CLMN  Number of Claims: 64
ECL   Exemplary Claim: 1
DRWN  9 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 2746
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB   This invention discloses an improved method for the sequential solution
      phase synthesis of oligonucleotides. The method lends itself to
      automation and is ideally suited for large scale manufacture of
      oligonucleotides with high efficiency.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L7  ANSWER 2 OF 3  USPATFULL on STN
AN   93:50606  USPATFULL
TI   Sequential peptide and oligonucleotide syntheses using immunoaffinity
      techniques
IN   Coolidge, Thomas R., Falls Village, CT, United States
```

09567863

Lewis, William, Lincoln, NE, United States  
Schuster, Sheldon M., Gainesville, FL, United States  
Wylie, Dwane, Lincoln, NE, United States  
Wagner, Fred W., Walton, NE, United States  
Stout, Jay, Lincoln, NE, United States  
van Heeke, Gino, Gainesville, FL, United States  
PA BioNebraska, Inc., Lincoln, NE, United States (U.S. corporation)  
Board of Regents of the University of Nebraska, Lincoln, NE, United States (U.S. corporation)  
PI US 5221736 19930622 <--  
AI US 1989-454372 19891221 (7)  
RLI Continuation-in-part of Ser. No. US 1988-288009, filed on 21 Dec 1988, now patented, Pat. No. US 5049656  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Moskowitz, Margaret; Assistant Examiner: Marschel, Ardin H.  
LREP Merchant, Gould, Smith, Edell, Welter & Schmidt  
CLMN Number of Claims: 33  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1822

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to a method of purifying sequentially synthesized peptides and oligonucleotides by affinity techniques. Selected products are capped with and N-terminus capping agent for peptides or a 5'-terminus capping agents for oligonucleotides, and then bound with affinity agents that are selective for the corresponding capping agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 3 OF 3 USPATFULL on STN  
AN 89:43432 USPATFULL  
TI Luminescent cyclic hydrazides for analytical assays  
IN Belanger, Alain, Cap-Rouge, Canada  
Brassard, Paul, Ste-Foy, Canada  
PA Universite Laval, Quebec, Canada (non-U.S. corporation)  
PI US 4835268 19890530 <--  
AI US 1987-46869 19870507 (7)  
PRAI CA 1986-508758 19860508  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Warden, Robert J.; Assistant Examiner: Benson, Robert  
LREP Swabey, Mitchell, Houle, Marcoux & Sher  
CLMN Number of Claims: 15  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 878

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed herein are derivatives of 5-(lower alkyl)-7-amino-2,3-dihydro-1,4-phthalazinedione having substituents on the amino group. The derivatives have luminescent properties which render them useful as analytical tools in clinical chemistry. Adaptation of the derivatives for luminescent immunoassay provides valuable reagents and assays with outstanding sensitivity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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=> file biosis medline caplus wpids uspatfull  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

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FILE 'USPATFULL' ENTERED AT 09:41:24 ON 15 APR 2004  
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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=> immobili? (3a) solid support? and Diels alder  
IMMOBILI? IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s immobili? (3a) solid support? and Diels alder  
L1 47 IMMOBILI? (3A) SOLID SUPPORT? AND DIELS ALDER

=> s l1 and bio?  
4 FILES SEARCHED...  
L2 43 L1 AND BIO?

=> dup rem l2  
PROCESSING COMPLETED FOR L2  
L3 43 DUP REM L2 (0 DUPLICATES REMOVED)

=> s l3 and py<=1998  
2 FILES SEARCHED...  
4 FILES SEARCHED...  
L4 6 L3 AND PY<=1998

=> d l4 bib abs 1-6

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1997:44661 CAPLUS  
DN 126:55924  
TI Nucleic acid detection and amplification by chemical linkage of  
oligonucleotides  
IN Segev, David  
PA Bio-Rad Laboratories Inc., USA; Segev, David  
SO PCT Int. Appl., 128 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9634984	A1	19961107	WO 1996-US6042	19960430 <--
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
	US 5843650	A	19981201	US 1995-431527	19950501 <--
	CA 2217325	AA	19961107	CA 1996-2217325	19960430 <--
	AU 9659183	A1	19961121	AU 1996-59183	19960430 <--
	EP 828856	A1	19980318	EP 1996-916435	19960430 <--
	R: DE, FR, GB, IT				
	JP 11504517	T2	19990427	JP 1996-533438	19960430
PRAI	US 1995-431527		19950501		
	WO 1996-US6042		19960430		

AB The invention is directed towards a method of amplifying target nucleic acids by using two oligonucleotide probe complement pairs. Each member of the probe pair contains a chemical functionality group which permits linkage of the probes when the functionality groups are adjacent to one another following hybridization of the probe pairs to the template. One probe in each pair is composed of two regions, a first region which hybridizes to the target and which contains the chemical functionality group and a second, protecting region which prevents target independent joining. The other probe in the pair contains the corresponding chemical functionality group. Upon joining of a first probe pair, an amplification can proceed in which the newly joined first probe pair can serve as a template for the second, complementary probe pair, which can in turn serve as a template for unjoined first probe pairs. This cyclic amplification is sensitive enough for a discriminative amplification of sequences which differ by merely a point mutation and therefore is suitable for point mutation detection and genotype determination as well as for the determination of the presence or absence of a specific nucleic acid in a sample. This nucleic acid amplification and detection method does not require use of polymerase or ligase. The products may be detected by a number of different methods, e.g. by electrophoretic size or through use of fluorometric labels or proximity labels. The method was demonstrated by detection of human papilloma virus type 16 using probe pairs containing propene and maleic acid reactive groups which react via a **Diels-Alder** reaction when the probes are hybridized to a target. In a modification of this method, one component of the probe pairs was 5'-labeled with fluorescein, another component with **biotin**. After amplification the reaction mixture was subjected to exonuclease VII digestion and probe duplexes were **immobilized** on avidin-coated **solid support**. Fluorescein, released by the exonuclease treatment and detected by fluorometry, was an indication of the presence of HPV-16.

L4 ANSWER 2 OF 6 USPATFULL on STN  
AN 1998:42258 USPATFULL  
TI Exopeptidase catalyzed site-specific bonding of supports, labels and **bioactive** agents to proteins  
IN Wagner, Fred W., Walton, NE, United States  
Coolidge, Thomas R., Falls Village, CT, United States  
Wyllie, Dwane E., Lincoln, NE, United States  
Schuster, Sheldon M., Gainesville, FL, United States  
Lewis, William, Lincoln, NE, United States  
Stout, Jay, Lincoln, NE, United States  
PA Board of Regents of the University of Nebraska, Lincoln, NE, United States (U.S. corporation)  
PI US 5741686 19980421 <--



. 09567863

AI US 1994-316810 19941003 (8)  
RLI Continuation of Ser. No. US 1993-61913, filed on 14 May 1993, now  
abandoned which is a continuation of Ser. No. US 1989-375138, filed on  
30 Jun 1989, now patented, Pat. No. US 5279954  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Naff, David M.  
LREP Merchant Gould Smith Edell Welter & Schmidt  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 17  
DRWN 4 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 1520

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for preparing a labeled protein, immobilized  
protein or protein-**bioactive** agent composition by attaching a  
label, support or **bioactive** agent to a protein by exopeptidase  
catalysis at a site that is remote from the active site of the protein.  
More specifically, an amine or alcohol group of an amino acid, amine or  
alcohol nucleophile is reacted by exopeptidase catalysis with a  
C-terminus carboxylic acid group of a protein such as an antibody,  
enzyme or hormone to couple the nucleophile to the protein to form an  
adduct, and the adduct is bound to an auxiliary substance such as a  
support, label or **bioactive** agent or its combination with a  
linker arm by reacting a reactive substituent of the nucleophile with a  
reactive group of the auxiliary substance. Alternatively, the  
nucleophile is bound to the auxiliary substance or its combination with  
a linker arm to form an intermediate, and the intermediate is coupled by  
exopeptidase catalysis to the protein. The exopeptidase may be a serine  
or cysteine exocarboxypeptidase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 6 USPATFULL on STN  
AN 1998:25397 USPATFULL  
TI Enantiomeric enrichment of bicyclic alcohols  
IN West, J. Blair, Bend, OR, United States  
DeVries, Keith, Old Saybrook, CT, United States  
PA Bend Research, Inc., Bend, OR, United States (U.S. corporation)  
PI US 5726344 19980310 <--  
AI US 1995-515153 19950815 (8)  
RLI Continuation of Ser. No. US 1994-275132, filed on 13 Jul 1994, now  
abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Geist, Gary; Assistant Examiner: Padmanabhan, Sreeni  
LREP Chernoff, Vilhauer, McClung & Stenzel, LLP  
CLMN Number of Claims: 2  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 334

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB There is disclosed a two-stage enzymatically catalyzed reaction for the  
selective preparation of the (R)-endo-isomer of norbornenol from a  
mixture containing all four stereo- and regioisomers of norbornenol, as  
well as the synthesis of the intermediate product comprising the  
enantiomerically enriched mono-ester of (R)-endo-norbornenol and a  
diacid, and of the enantiomerically enriched saturated alcohol  
(R)-endo-norborneol. There is also disclosed a method for the production  
of (R)-endo-norborne-2-ol, by chemical reduction of either the  
enantiomerically enriched monoester and subsequent hydrolysis, or by  
hydrolysis of the enantiomerically enriched monoester and then chemical  
reduction.

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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 6 USPATFULL on STN  
AN 94:5808 USPATFULL  
TI Exopeptidase catalyzed site-specific bonding of supports, labels and  
**bioactive** agents to proteins  
IN Wagner, Fred W., Walton, NE, United States  
Coolidge, Thomas R., Falls Village, CT, United States  
Wylie, Dwane E., Lincoln, NE, United States  
Schuster, Sheldon M., Gainesville, FL, United States  
Lewis, William, Lincoln, NE, United States  
Stout, Jay, Lincoln, NE, United States  
PA Board of Regents of the University of Nebraska and BioNebraska, Lincoln,  
NE, United States (U.S. corporation)  
PI US 5279954 19940118 <--  
AI US 1989-375138 19890630 (7)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Naff, David M.  
LREP Merchant, Gould, Smith, Edell, Welter & Schmidt  
CLMN Number of Claims: 40  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 1770

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides a means for attaching a label, support or  
**bioactive** agent to a protein with an exopeptidase at a site that  
is remote from the active site of the protein. More specifically the  
invention is directed to a method for the attachment of an amino acid,  
amine and alcohol nucleophile to the carboxyl terminus of a protein. In  
one embodiment, a labeled nucleophile is attached to a protein such as  
an antibody. In other embodiments, the invention is directed to a method  
for the attachment of a protein to an immobilization support and to a  
method for the attachment of a **bioactive** agent to a protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 6 USPATFULL on STN  
AN 93:65292 USPATFULL  
TI Exopeptidase catalyzed site-specific bonding of supports, labels and  
**bioactive** agents to proteins  
IN Wagner, Fred W., Walton, NE, United States  
Coolidge, Thomas R., Falls Village, CT, United States  
Schuster, Sheldon M., Gainesville, FL, United States  
Stout, Jay, Lincoln, NE, United States  
Wylie, Dwane E., Lincoln, NE, United States  
Breddam, Klaus, Glostrup, Denmark  
Lewis, William, Lincoln, NE, United States  
PA Board of Regents of the University of Nebraska, Lincoln, NE, United  
States (U.S. corporation)  
BioNebraska, Inc., Lincoln, NE, United States (U.S. corporation)  
PI US 5234820 19930810 <--  
AI US 1990-545915 19900628 (7)  
RLI Continuation-in-part of Ser. No. US 1989-375138, filed on 30 Jun 1989  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Naff, David M.  
LREP Merchant, Gould, Smith, Edell, Welter & Schmidt  
CLMN Number of Claims: 7  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Figure(s); 2 Drawing Page(s)

09567863

LN.CNT 1768

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An auxiliary substance such as a label, support, or **bioactive** agent is attached to a protein at a site that is remote from the active site of the protein by the use of exopeptidase and a nucleophile which is an amino acid, amino acid derivative, amine or alcohol. In one embodiment, the nucleophile is attached to the carboxy terminus of a protein by catalysis with exopeptidase to form an adduct and then the adduct or its combination with a linker arm is bound to the auxiliary substance. In another embodiment, the auxiliary substance or its combination with a linker arm is bound to the nucleophile to form an intermediate substance which is then coupled by catalysis with exopeptidase to the carboxy terminus of a protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 6 USPATFULL on STN

AN 93:50606 USPATFULL

TI Sequential peptide and oligonucleotide syntheses using immunoaffinity techniques

IN Coolidge, Thomas R., Falls Village, CT, United States

Lewis, William, Lincoln, NE, United States

Schuster, Sheldon M., Gainesville, FL, United States

Wylie, Dwane, Lincoln, NE, United States

Wagner, Fred W., Walton, NE, United States

Stout, Jay, Lincoln, NE, United States

van Heeke, Gino, Gainesville, FL, United States

PA BioNebraska, Inc., Lincoln, NE, United States (U.S. corporation)

Board of Regents of the University of Nebraska, Lincoln, NE, United States (U.S. corporation)

PI US 5221736 19930622 <--

AI US 1989-454372 19891221 (7)

RLI Continuation-in-part of Ser. No. US 1988-288009, filed on 21 Dec 1988, now patented, Pat. No. US 5049656

DT Utility

FS Granted

EXNAM Primary Examiner: Moskowitz, Margaret; Assistant Examiner: Marschel, Ardin H.

LREP Merchant, Gould, Smith, Edell, Welter & Schmidt

CLMN Number of Claims: 33

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1822

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to a method of purifying sequentially synthesized peptides and oligonucleotides by affinity techniques. Selected products are capped with and N-terminus capping agent for peptides or a 5'-terminus capping agents for oligonucleotides, and then bound with affinity agents that are selective for the corresponding capping agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L4 ANSWER 3 OF 6 USPATFULL on STN

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SUMM . . . the corresponding saturated alcohol norborneol ([2.2.1]-bicyclo-heptan-2-ol) are important intermediates for the production of numerous classes of compounds including pharmaceuticals. When **biologically** active norbornenol derivatives are prepared

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that contain chiral centers, it is often highly desirable that they be in an enantiomerically. . . .

SUMM . . . . that alcohols can be resolved by enzyme-catalyzed hydrolysis of esters of the alcohol. For example, Cambou et al., in 26

**Biotechnol. Bioeng.** 1149(1984), disclose the resolution of sec-butanol by hydrolysis of its butyric acid ester with *Candida cylindracea* lipase. However, the resolution. . . .

SUMM . . . . the (R)-endo-isomer. The method comprises first hydrolyzing (Reaction I) a mixture of ester isomers such as that obtainable from a **Diels-Alder** coupling of vinyl acetate and cyclopentadiene (Ester I) with a hydrolase enzyme (Enzyme I) in a chiefly aqueous reaction medium.. . .

SUMM . . . . Enzyme II must have an aggregate selectivity toward the (R)-endo-isomer over each of the three isomers. Enzyme II is preferably **immobilized** onto a **solid support** by absorption or by covalent bonding. Immobilization may be accomplished by preparing a slurry of the solid support in an. . . .